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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,288	04/11/2000	Nir N. Shavit	33226/959002; P4663	4871
33615 7590 09/22/2008 OSHA LIANG L.L.P./SUN 1221 MCKINNEY, SUITE 2800 HOUSTON, TX 77010				
EXAMINER				
LI, AIMEE J				
ART UNIT		PAPER NUMBER		
2183				
NOTIFICATION DATE		DELIVERY MODE		
09/22/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/547,288

Applicant(s)

SHAVIT ET AL.

Examiner

AIMEE J. LI

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 57-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 57-95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date: _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. New claims 57-95 have been added and considered as per Applicants' request. Claims 1-56 have been cancelled as per Applicants' request.

Papers Submitted

2. It is hereby acknowledged that the following papers have been received and placed of record in the file: RCE as filed 23 June 2008; Extension of Time for 1 Month as filed 23 June 2008; and Amendment as filed 23 June 2008.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 June 2008 has been entered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 57-95 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. Claims 57-95 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. Claims 57-71 and 86-90 recite the limitation, taking claim 57 as exemplary, "executing a second pop front instruction without reading the back counter after executing the first pop back instruction and the first pop front instruction." Claims 72-85 and 91-95 recite the limitation, taking claim 72 as exemplary, "executing a second push front instruction without reading the back counter after executing the first push back instruction and the first push front instruction." The claim further defines the "back counter" as, taking claim 57 as exemplary, "indexing a back location immediately before the first location". As such, the claims are executing a pop or push front instruction without reading a pointer indexing the location immediately before the first location after executing a first pop back instruction and a first pop front instruction. As is well known in the art, in order to assure data is not removed from an empty array or added to a full array, the front and back pointers are used to determine whether an array is empty or full, since special operations need to be performed in these situations when removing, or popping, from the array and adding, or pushing, data to the array. Without assuring whether the array is empty or full when popping or pushing to an array, there is a risk of removing trash data when the array is empty, thereby using corrupted and erroneous data, or adding to an already full array, thereby erasing useful data or causing an overflow error. After reviewing the specification, since Applicants' arguments did not indicate where the new limitations in the new claims were taught in the specification, the Examiner was unable to locate a teaching of how the instant application

determined whether the array is empty or full without using the back pointer, especially with a circular array as claimed, so it is unclear how the push and pop operations would be implemented without using the back counter, as is well-known and taught in the prior art, and still ensure data coherency and usefulness.

8. Since the prior art explicitly teaches the need for checking whether the array is full or empty using front and back pointers in a circular array to ensure no errors occur, no prior art could be found teaching this limitation of the claims.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 57-71 and 86-90 recite the limitation, taking claims 57 as exemplary, "executing a second pop front instruction without reading the back counter after executing the first pop back instruction and the first pop front instruction". There is insufficient antecedent basis for this limitation in the claim. This limitation was not taught in the specification.

11. Claims 72-85 and 91-95 recite the limitation, taking claims 72 as exemplary, "executing a second push front instruction without reading the back counter after executing the first push back instruction and the first push front instruction". There is insufficient antecedent basis for this limitation in the claim. This limitation was not taught in the specification.

12. Claims 86-95 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims contain the language "means for" which invokes 35 U.S.C. 112, 6th paragraph requirements. These requirements include adequate support for a physical structure to support the functionality of the means plus function claims. However, there is no physical

structure taught in specification. Rather, the specification teaches a software implementation, which is not a physical structure.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 57-95 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

15. Claims 57-85 recite a method without any recitation that the method is being performed on a processor, system, or other apparatus. Simply reciting “executing...instruction...” does not imply the method is performed on a processor or other apparatus, thereby claiming a method of operation of a machine. As is, there is nothing to distinguish the current method from a series of steps that can be done outside of a physical computer or apparatus. Without support in the claim linking the method to another statutory category, such as a physical machine, the claims are nothing more than a series of mental steps or steps of an abstract idea, like software.

16. Claims 86-95 recite “An apparatus, comprising: means for...” However, all teachings of “means for” performing the recited functionality is software in the specification and include no explicit recitation of any hardware or physical component, nor do the claims include any component which must be interpreted solely as hardware. Consequently, when all of the components of claims 86-95 are software, applicant’s claims are directed to software per se, which does not fall into one of the four statutory categories of invention. Software is merely an abstract idea.

Response to Arguments

17. Applicant's arguments with respect to claims 57-95 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AIMEE J. LI whose telephone number is (571)272-4169. The examiner can normally be reached on M-T 7:00am-4:30pm.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aimee J Li/
Primary Examiner, Art Unit 2183
12 September 2008